WHAT IS CLAIMED IS:

- 1. A sample holder for x-ray diffraction analysis, said sample holder comprising a plurality of surfaces oriented at nonzero angles relative to one another.
- 2. A sample holder for x-ray diffraction analysis, said sample holder comprising a curved surface suitable for holding samples.
- 3. A sample holder for x-ray diffraction analysis, said sample holder comprising a plurality of removable individual sample holders.
- 4. A method of x-ray diffraction analysis comprising the step of disposing samples in the sample holder of claim 1, and analyzing the samples.
- 5. A method of x-ray diffraction analysis comprising the step of disposing samples in the sample holder of claim 2, and analyzing the samples.
- 6. A method of x-ray diffraction analysis comprising the step of disposing samples in the sample holder of claim 3, and analyzing the samples.